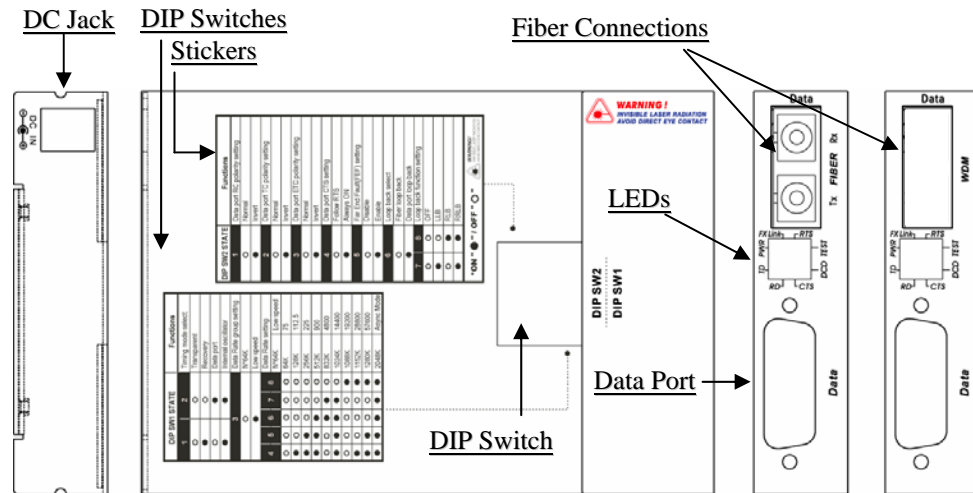


Installation Instructions for FIB1-Data Datacom to Fiber Converter Family FIB1-V35 / FIB1-232 / FIB1-530(RS530/RS449/X.21)

Description

The FIB1 Family are standalone fiber media converters available in a number of different models that also act as line cards for placement in the FRM301 Platform Media Converter Chassis. The FIB1-DATA is a media converter for V.35, RS-232, RS-530, X.21 or RS-449 high-speed synchronous or low-speed synchronous and asynchronous data transmission over optical fiber media.

All media converters are available with either multi-mode or single-mode optical transceivers and with connectors for SC, ST or FC. In single mode, WDM (Wave Division Multiplexing with SC connector) is also available in 20 or 40KM reach, which will provide the ability to transmit and receive data using only a single optical fiber. When the FIB1-DATA card is placed in the FRM301 rack with SNMP management, the card status, type, version, fiber link status, data link status and alarms can all be displayed. Configuration is also available to enable or disable the port, reset the port, set the data rate, modify the clock mode, and initiate local or far end loop back tests.



Fiber Optic Connectors

Two connectors are provided for fiber optic cable connection.

One is for transmission and the other is for reception of optical data. (WDM transceiver has only on SC connector for bi-directional transmissions on a single fiber)

Environment

Temperature : 0°C - 70°C

Humidity 10-90% non condensing

Dimension

122.6mm x 85.6mm x 20mm

(H x W x D)

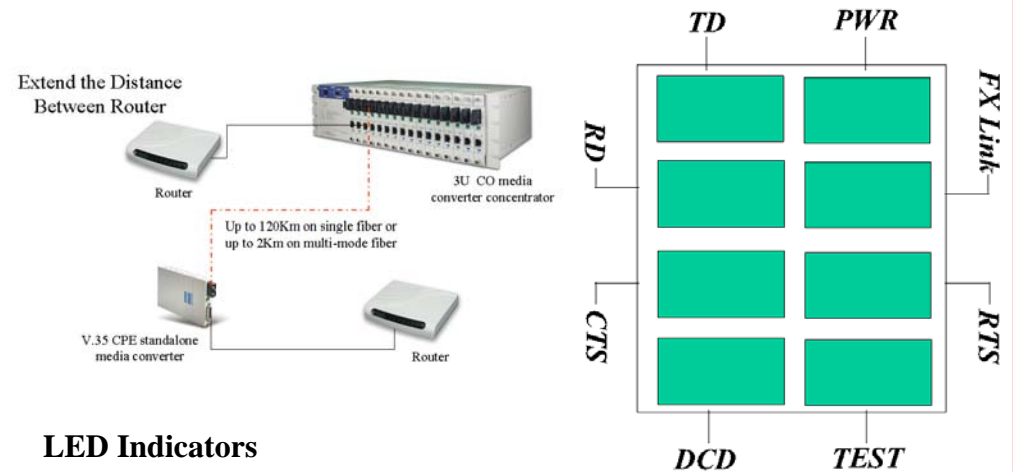
Power

+9V /1A maximum

DC Cable Type :

Wire with white pattern around is positive

Wire in black is negative



LED Indicators

LED	Function	State	Status
PWR	Power indicator	On	Converter has power
		Off	Converter has no power
		Blinking	No SNMP is installed in FRM301
FX Link	Fiber link	On	The fiber link is up
		Off	No signal or fiber link is down
		Blinking	Remote side fiber Sync loss
Test	Mode display	On	Any loopback test is on
		Off	Normal status
TD	Mode display	On	"Data Signal" is on "High" position
		Off	"Data Signal" is on "Low" position
		Blinking	Normal Data Transmitting Status
RD	Mode display	On	"Data Signal" is on "High" position
		Off	"Data Signal" is on "Low" position
		Blinking	Normal Data Transmitting Status
RTS	Mode display	On	"Data Signal" is on "High" position
		Off	"Data Signal" is on "Low" position
CTS	Mode display	On	"Data Signal" is on "High" position
		Off	"Data Signal" is on "Low" position
DCD	Mode display	On	"Data Signal" is on "High" position
		Off	"Data Signal" is on "Low" position

Specifications

Data Signal Specification

Ports 1 port V.35/RS-232/RS-530(X.21,RS-449)
Interface connector V.35 (HD26 to MB34 cable)
 RS-232 (HD26 to DB25 cable) / RS-530 (HD26 to DB25 cable)
 X.21 (HD26 to DB15) / RS-449 (HD26 to DB37 cable)

Line Code NRZ
Data Rate RS-232 up to 256K sync and async
 V.35/RS-530 up to 2048K sync and async
 n * 64Kbps ,where n=1 to 32 (64 ~ 2048Kbps)
 Low speed, 75 to 115200bps

Clock modes Transparent, Recovery (from optical), External (from datacom) or Internal (from crystal)

Control signals CTS constantly ON or follows RTS
 DSR constantly ON, except during test loops
 DCD constantly ON, except during optical signal loss

Test Loops LLB (Local Loop Back) / RLB (Remote Loop Back)
 RRLB (Far end remote loop back). All loop tests for both fiber and data port.

Front Panel DIP Switch Setting

For use in standalone application (not used when inserted into FRM301 with SNMP)

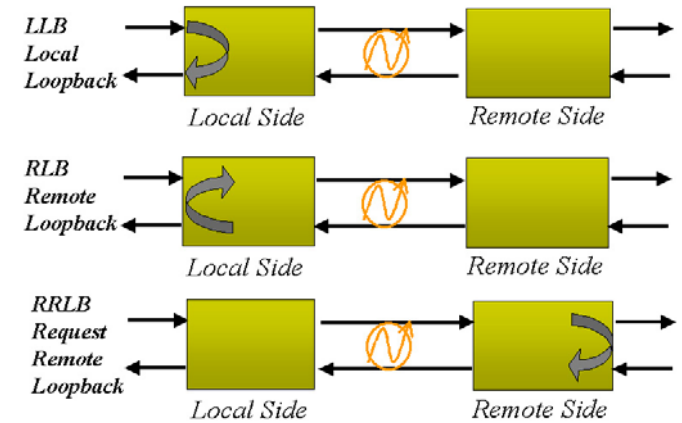
STATE					Function Description	
1		2			Timing mode select	
OFF		OFF			Transparent	
ON		OFF			Recovery	
OFF		ON			Data port	
ON		ON			Internal oscillator	
3					Data rate group setting	
OFF					N*64K	
ON					Low speed	
4					Data rate setting	
					N*64K Low speed	
OFF	OFF	OFF	OFF	OFF	64K	75
ON	OFF	OFF	OFF	OFF	128K	112.5
OFF	ON	OFF	OFF	OFF	192K	150
ON	ON	OFF	OFF	OFF	256K	225
OFF	OFF	ON	OFF	OFF	320K	300
ON	OFF	ON	OFF	OFF	384K	450
OFF	ON	ON	OFF	OFF	448K	600
ON	ON	ON	OFF	OFF	512K	900
OFF	OFF	OFF	ON	OFF	576K	1200
ON	OFF	OFF	ON	OFF	640K	1800
OFF	ON	OFF	ON	OFF	704K	2400
ON	ON	OFF	ON	OFF	768K	3600
OFF	OFF	ON	ON	OFF	832K	4800
ON	OFF	ON	ON	OFF	896K	7200
OFF	ON	ON	ON	OFF	960K	9600
ON	ON	ON	ON	OFF	1024K	14400
OFF	OFF	OFF	OFF	ON	1088K	19200
ON	OFF	OFF	OFF	ON	1152K	28800
OFF	ON	OFF	OFF	ON	1216K	38400
ON	ON	OFF	OFF	ON	1280K	57600
OFF	OFF	ON	OFF	ON	1344K	76800
ON	OFF	ON	OFF	ON	1408K	115200
OFF	ON	ON	OFF	ON	1472K	
ON	ON	ON	OFF	ON	1536K	
OFF	OFF	OFF	ON	ON	1600K	
ON	OFF	OFF	ON	ON	1664K	
OFF	ON	OFF	ON	ON	1728K	
ON	ON	OFF	ON	ON	1792K	
OFF	OFF	ON	ON	ON	1856K	
ON	OFF	ON	ON	ON	1920K	
OFF	ON	ON	ON	ON	1984K	
ON	ON	ON	ON	ON	2048K	Async Mode

DIP SW#1 Table

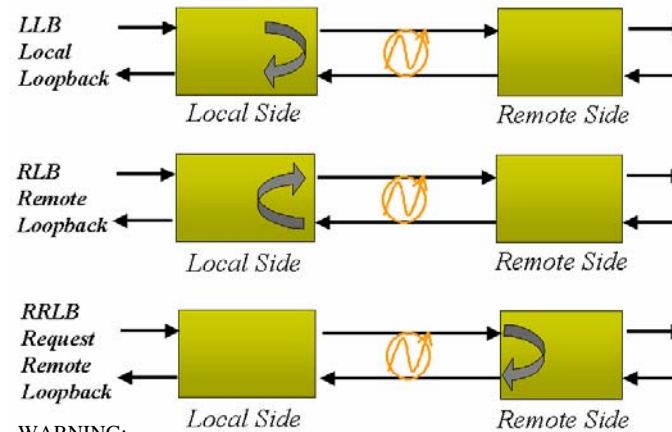
STATE	Function Description	
1	Data port RC polarity setting	
OFF	Normal	
ON	Invert	
2	Data port TC polarity setting	
OFF	Normal	
ON	Invert	
3	Data port ETC polarity setting	
OFF	Normal	
ON	Invert	
4	Data port CTS setting	
OFF	Follow RTS	
ON	Always ON	
5	Far End Fault (FEF) setting	
OFF	Disable	
ON	Enable	
6	Look back select	
OFF	Fiber loop back	
ON	Data port loop back	
7	8	Loop back test setting
OFF	OFF	All loop back off
ON	OFF	LLB
OFF	ON	RLB
ON	ON	RRLB

DIP SW#2 Table

Data Port Loop Back



Optical Loop Back



WARNING:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual may cause harmful interference in which case the user will be required to correct the interference at his own expense. NOTICE: (1) The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (2) Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.

CISPR PUB.22 Class A COMPLIANCE:

This device complies with EMC directive of the European Community and meets or exceeds the following technical standard. EN 55022 - Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment. This device complies with CISPR Class A.

WARNING:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

CE NOTICE

Marking by the symbol CE indicates compliance of this equipment to the EMC directive of the European Community. Such marking is indicative that this equipment meets or exceeds the following technical standards: EN 55022:1994/A1:1995/A2:1997 Class A and EN61000-3-2:1995, EN61000-3-3:1995 and EN50082-1:1997 Ver.1.0

Loop-back Testing(LBT)Note :

(While this feature is operating the data transmission will be halted)

This media converter incorporates a Loop-back features which allow loop back testing to confirm that the fiber loop and interface transceivers are operational or not. This feature is enabled by the DIP switch#6,7,8 on the side panel.

The FIB1 series is compatible with FRM301 rack series for this feature. You may test the whole link with FIB1 & FRM301 rack.